



## *Cissus vitiginea* L.: a new addition to the flora of Madhya Pradesh, India

K. L. Meena

Herbarium and Laboratory of Plant Taxonomy, Department of Botany, Manikya Lal Verma Government College, Bhilwara - 311 001, Rajasthan, India  
E-mail: kanhaiyameena211@yahoo.com

**Abstract:** *Cissus vitiginea* L. (Vitaceae) is reported from the state of Madhya Pradesh (India) for the first time.

**Key words:** Vitaceae; new record; range extension

The genus *Cissus* L. (family Vitaceae) has a pantropical distribution and about 150 species (Shetty and Singh 2000). Among *Cissus* spp., *C. vitiginea* L. is known from India and Sri Lanka (Shetty and Singh 2000). In India, Pullaiah et al. (1998) reported *C. vitiginea* from Andhra Pradesh. Later, other researchers extended its distribution to other Indian states, including Karnataka and Maharashtra (Pullaiah et al. 2000, 2002), and Khanna et al. (2001) reported it from the Bastar district of Chhattisgarh state. However, *C. vitiginea* was not recorded, until now, known from Madhya Pradesh (Tiwari 1968; Agarkar 1969; Saxena 1970; Gupta and Ram Lal 1973; Oomachan 1977; Verma and Das 1982; Datta and Dixit 1985; Verma et al. 1993; Samvatsar 1996; Meena 2014; Singh 2014). Thus, the new records constitute to be an addition to the flora of Madhya Pradesh (Figure 1).

Botanical explorations were made in the Malwa region of state of Madhya Pradesh, India. Geographically, the Malwa region is situated on a plateau in western Madhya Pradesh. These surveys found several unknown plants that were collected from Omkareshwar (Khandwa district) along the bank of the Narmada River (22°61' N, 076°03' E). Later, taxonomic study and reference to the literature (Singh and Shetty 1986; Pullaiah et al. 1998, 2000, 2002; Shetty and Singh 2000) determined these plants to be *C. vitiginea*. The identification was corroborated by Dr. S. L. Meena (Botanical Survey of India) and Dr. P. Santhan and by comparison to herbarium specimens held by the Botanical Survey of India (Arid Zone Regional Centre, Jodhpur). Newly collected specimens were deposited at the herbarium of Department of Botany, Manikya Lal Verma Government College (Bhilwara).

***Cissus vitiginea*** L. 1753: 117. Planchon in de Candolle (1887): 472; Shetty and Singh in Singh et al. (2000): 294.

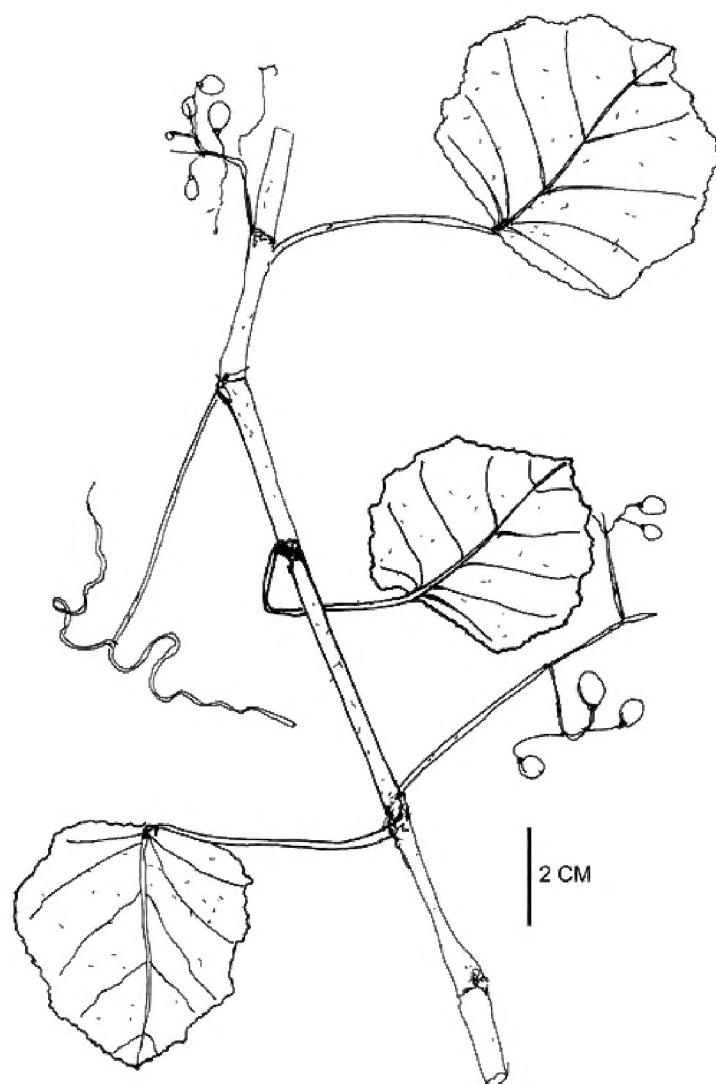
*Vitis linnaei* Wallich ex Wight & Walker-Arnott (1834): 126; Lawson in Fl. Brit. India 1: (1875): 649.

Figures 2–4.

Climbing, foetid shrubs. Branches subterete, striate, covered with short grey or fulvous pubescence, swollen at nodes. Tendril simple, sometimes bifid or branched. Leaves simple, rotund-ovate to deeply 3–5 lobed, 3.5–8 × 3–7.5 cm, base truncate to cordate, margin irregularly dentate, apex acute or obtuse, pubescent. Petioles 4–9 cm long, pubescent. Stipules triangular, pubescent. Inflorescence umbellate cymes. Peduncle 3–5 cm long.



**Figure 1.** Distribution of *Cissus vitiginea* L. in Madhya Pradesh state, India.



**Figure 2.** Habit of *Cissus vitiginea* L.

Calyx cupular, 4-lobed, pubescent. Petals 4, oblong-ovate, obtuse, recurved, yellow. Stamens 4; filaments green; anthers rotund, yellow. Disk more or less 4-lobed, fleshy, covering ovary, yellow. Ovary ovoid; 2-loculed; style short; stigma sessile, minute. Berry pyriform, apiculate, 4–7 mm across, purple with a glaucous bloom on surface, 1-seeded. Seeds ovoid, tessellate on either side of raphe with angular faces.

*New record:* India: Madhya Pradesh: Khandwa: Omkareshwar; Santhan, P. M-501; Meena, M-539 and M-842 (MLVGCB Herbarium) (Figure 4).

*Cissus vitiginea*, which flowers and fruits in August to December (present study), was found to be rare on rocks along the bank of the Naramada River. These records are the first from the Indian state of Madhya Pradesh. The nearest previously known occurrences for this species, in Karnataka and Maharashtra states, are 730 km southeast of the new records (Shetty and Singh 2000; Pullaiah et al. 1998).

#### ACKNOWLEDGEMENTS

I am grateful to Dr. V. Singh (Emeritus Scientist and Ex-Additional Director), Dr. Vinod Maina (Scientist-in-Charge) and Dr. S. L. Meena (scientist), Arid zone circle Botanical Survey of India, Jodhpur, for deposition and confirmation of the identity of the specimens. I also thank Dr. P. Santhan (Natural Remedies Private Limited, Bangalore) for confirming of the identification, as well as the Principal, Vice Principals and Dr. B. L. Yadav (Botany Departmental Head), Manikya Lal Verma Government College (Bhilwara) for providing the facilities. Financial



**Figure 3.** *Cissus vitiginea* L. **A:** habitat. **B:** inflorescence. **C:** immature and mature fruits. **D:** seed.

assistance in the form of a Post-Doctoral Fellowship by University Grants Commission, New Delhi, is gratefully acknowledged.

#### LITERATURE CITED

- Agarkar, D.S. 1969. Enumeration of the plants of lower Chambal valley ravines, Madhya Pradesh. Bulletin Botanical Survey India 11: 398–402.
- Datta, B. and S.K. Dixit 1985. Some interesting plant records for the flora of Madhya Pradesh. Indian Journal of Forestry 8: 73–74.
- Gupta, S. and R. Lal 1973. Flora of Sidhi district of Madhya Pradesh. Indian Journal of Forestry 15: 182–188.
- Khanna, K.K., A. Kumar, R.D. Dixit and N.P. Singh. 2001. Supplement to the flora of Madhya Pradesh. BSI, Kolkata: Botanical Survey of India. 587 pp.
- Lawson, M. A. 1975. in: J.D. Hooker. The flora of British India. Vol. I. Ranunculaceae to Sapindaceae. London: Reeve & Co. viii + xxix + 740 pp.
- Linnaeus, C. 1753. Species plantarum, exhibentes plantas rite cognitas, ad genera relatas, cum differentiis specificis, nominibus trivialibus, synonymis selectis, locis natalibus, secundum systema sexuale digestas. Tomus I. Holmiae: Impensis Laurentii Salvii. 560 pp. doi: 10.5962/bhl.title.669
- Meena, K.L. 2014. *Mnesitheia granularis* (L.) Koning & Sosef: a new record to the flora of the Malwa region, India. Check List 10(2): 374–375. doi: 10.15560/10.2.374
- Oommachan, M. 1977. The flora of Bhopal. Bhopal: Jain brothers, Bhopal. xi + 474 pp.
- Planchon, J.E. 1887, Ampelideae; pp. 305–637, in: A.L.P.P. de Candolle (ed.). Monographie phanerogamarum prodromi nunc continuatio, nunc revisio auctoribus. Vol. 5.
- Pullaiah, T., Prabhakar, C. and B.R.P. Rao 1998. Flora of Medak district, Andhra Pradesh. Delhi: Daya Book. 305 pp.
- Pullaiah, T., Ramakrishnainh, V., Rani, R.S. and P.N. Rao 2000. Flora of Guntur district, Andhra Pradesh, India. New Delhi: Regency Publications. 417 pp.
- Pullaiah, T., Muralidharan, D., and S. Ramamurthy 2002. Flora of Eastern Ghats: Hill Ranges of south east India Vol. I. New Delhi: Regency Publications. 346 pp.



**Figure 4.** Herbarium sheet of *Cissus vitiginea* L., showing flowers and fruits. India: Madhya Pradesh: Khandwa: Omkareshwar; M-842 (MLVGCB Herbarium).

- Samvatsar, S. 1996. Flora of Western tribal Madhya Pradesh. Jodhpur: Scientific Publishers. 441 pp.
- Saxena, H.O. 1970. The flora of Amarkantak (Madhya Pradesh). Bulletin Botanical Survey of India 12: 37–66.
- Shetty, B.V. and V. Singh 2000. Vitaceae; pp. 246–324, in: Singh, N.P., J.N. Vohra, P.K. Hajra and D.K. Singh (eds.). Flora of India. Vol. V. Kolkata: Botanical Survey of India,
- Singh, V.P. 2014. Flora of Madhya Pradesh (Western part). Jodhpur : Scientific publishers. 558 pp.
- Singh, P. and B.V. Shetty. 1986. Nomenclature notes on Vitaceae of Indian subcontinent. Taxon 35: 596–597.
- Tiwari, S.D.N. 1968. Flora of Bandhavgarh. The Indian Forester 91(7): 580–590. <http://www.indianforester.co.in/index.php/indianforester/article/view/26036>

- Verma, R. and R.R. Das 1982. Floristic composition of the Kolaras range, district Shivpuri, Madhya Pradesh. Journal of Economic and Taxonomic Botany 3: 751–768.
- Verma, N.P., K.K. Khanna, V. Mudgal and R.D. Dixit (eds.). 2001. Flora of Madhya Pradesh. Vol. I. Kolkata: Botanical Survey of India. 587 pp.
- Verma, D. M., N.P. Balakrishnan and R.D. Dixit (eds). 1993. Flora of Madhya Pradesh. Vol. I. Kolkata: Botanical Survey of India. 668 pp.
- Wight, R. and G.A. Walker-Arnott. 1834. Prodromus florae peninsulae Indiae orientalis. London: Parbury, Allen and Co. 126 pp.

**Submitted:** 4 March 2015

**Accepted:** 2 February 2016

**Academic editor:** Jamilah Salim